MR. LEAVER and I would be the last to deny that today is a good era in which to live. We are having a wonderful time and, although we notice one or two imperfections in our society, we would certainly not take any bets that society would be better a thousand years hence. Far from believing in automatic progress, I think it is at least implied in our paper that we belong to the school of thought which feels that the natural course of development is toward dissolution and decay.

I am no expert on the history of invention, but it does seem clear to me, at least from reading the transactions of the Philosophical Society for a period covering the first half of the eighteenth century, that an immense amount of effort was wasted on the development of perpetual motion machines. Similarly, vast numbers of man-hours were wasted on the same project even after the possibility of attaining perpetual motion had been definitely disproved. This was done by those thousands of people (among them Mr. Rose) who had not yet got around to reading the literature on the subject.

J. J. BROWN
Aluminum Company of Canada, Ltd., Montreal

Book Reviews

Die Sonnenkorona: Beobachtungen der Korona 1939–1949, Vol. I. M. Waldmeier. Basel: Verlag Birkhäuser, 1951. 270 pp. Sw. fr. 24.60; cloth, Sw. fr. 28.60.

At present the investigation of the solar corona can be considered as the central problem of solar research. Since 1931, when B. Lyot succeeded in constructing a coronagraph, which permits regular observation and photography of the corona independent of the event of a solar eclipse, considerable advance has been made in the understanding of this phenomenon. This rapid progress is vividly illustrated by the fact that the present comprehensive treatment of corona physics could be undertaken just two decades later. The author, an authority in this field of research, is director of the Swiss Federal Observatory in Zurich. For decades the scientific program there has been devoted to solar research and, as a result of Waldmeier's efforts, the observatory has extended its activities to corona research. For this purpose, a special observatory has been established on a mountain near Arosa at an altitude of 6725 feet, and extensive research has been carried out since 1939. By means of spectroscopic investigations with a coronagraph, the intensities of two corona lines have been measured as a function of the position angle of the solar disk. The two corona lines employed are the green and red, with wavelengths of 5303 and 6374 A, respectively, attributed by Grotrian and Edlén to forbidden transitions in highly ionized states of the iron atom, namely, Fe XIV and Fe X.

The present volume contains a detailed description of the observatory in Arosa, the coronagraph, and the spectroscopic equipment. After a discussion of the research program and a description of the method employed, there are 1410 polar diagrams containing the spectrophotometric observations made with the green and red corona lines. The statistical evaluation of this extensive material will be given in a second volume, which will also contain results of further investigations. A third volume is planned to present a comprehensive treatment of our knowledge of corona physics. All scientists interested in this fascinating subject look forward with great expectation to the publication of these volumes.

It may be mentioned that at present five observatories are active in this type of research. Besides the original one of B. Lyot on the Pic du Midi in France, there are others in Austria, Germany, Switzerland, and the United States (at Climax, Colorado).

K. W. MEISSNER
Department of Physics, Purdue University

Organic Chemistry (Holleman's). Rev. by J. P. Wibaut; trans. from 16th Dutch ed. by Samuel Coffey. Houston–Amsterdam: Elsevier, 1951. 660 pp. $9.00.

To one who some 25 years ago was nourished on Holleman's *Organic Chemistry,* this revision and modernization by Professor Wibaut is most welcome. It has always seemed a glaring omission that some qualified person had not undertaken a definitive revision of what was in its prime one of the classics of elementary organic chemistry textbooks. It was, therefore, with considerable anticipation that this reviewer began perusal of the latest edition of Holleman.

It must be admitted, however, that the reader's hopes were somewhat dampened. It developed that the thickness of the paper on which the book is printed had contributed strongly to the visions he had entertained regarding the comprehensiveness of the revised Holleman.

As stated in the preface, the book is intended not only for students who have chosen chemistry as their main subject, but also for students of medicine and biology. In the attainment of this aim Wibaut has succeeded admirably. The ultramodern organic chemist, who can find no basis for the subject other than in indiscriminate use of ionic conceptions, will undoubtedly find much to criticize in this edition. On the other hand, those who cling to the classical approach to the subject, tempered with a modest introduction of the newer concepts, will find much comfort in the presentation of the material. In the opinion of this reviewer, Wibaut has succeeded admirably in blending the old